

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A network bridging device comprising:
  - a first connection section configured to be connected to a first network;
  - a second connection section configured to be connected to a second network different from the first network;
  - ~~a control section configured to detect equipment connected to the second network through the second connection section, to generate identification information by which the detected equipment is added to the first network, and to transmit the information to the first network through the first connection section~~
  - a quantity detection section configured to detect a number of equipment connected to the second network through the second connection section;
  - an information collection section configured to collect information on the equipment connected to the second network through the second connection section;
  - a detection section configured to detect a change caused in either the number detected by the quantity detection section or the information collected by the information collection section;
  - a set membership assignment section configured to assign, when the detection section detects a change in the number or the information, a set membership to each equipment connected to the second network, the set membership being valid when a virtual connection on the first network is established;

an assignment section configured to generate as many identification information as the number of the equipment detected by the quantity detection section and assign the identification information to the respective equipment connected to the second network, in accordance with the set membership assigned by the set membership assignment section;

a reset section configured to require reconstruction for adding the equipment connected to the second network to the first network, while the identification information is assigned by the assignment section to the respective equipment connected to the second network; and

a transmitting section configured to transmit the identification information to the first network through the first connection section, while the reconstruction is required by the reset section.

2-12. (Canceled)

13. (New) The device according to claim 1, further comprising:

a storage section configured to store the information collected by the information collection section and the identification information generated by the assignment section in relation to each other; and

a transfer section configured to receive data supplied from the first network through the first connection section, specify the equipment connected to the second network from identification information included in the data in accordance with contents stored in the storage section, and transmit the data to the specified equipment.

14. (New) A network bridging method for making data transmission between first and second networks different from each other, comprising:

a first step for detecting a number of equipment connected to the second network;

a second step for collecting information on the equipment connected to the second network;

a third step for detecting a change caused in either the number detected in the first step or the information collected in the second step;

a fourth step for assigning, when a change in the number or the information is detected in the third step, a set membership to each equipment connected to the second network, the set membership being valid when a virtual connection on the first network is established;

a fifth step for generating as many identification information as the number of the equipment detected in the first step and assigning the identification information to the respective equipment connected to the second network, in accordance with the set membership assigned in the fourth step;

a sixth step for requiring reconstruction for adding the equipment connected to the second network to the first network, while the identification information is assigned to the respective equipment connected to the second network in the fifth step; and

a seventh step for transmitting the identification information to the first network, while the reconstruction is required in the sixth step.

15. (New) The method according to claim 14, further comprising:

an eighth step for storing the information collected in the second step and the identification information generated in the fifth step in relation to each other; and

a ninth step for receiving data supplied from the first network, specifying the equipment connected to the second network from identification information included in the data in accordance with contents stored in the eighth step, and transmitting the data to the specified equipment.